CLAIMS

What is claimed is:

1. A method for managing packet communications over a network of distributed systems, each said distributed system being connected to a public communications network through at least one common contact point, communications from said public communications network being directable to users on each of said distributed systems through a selected said common contact point, said method comprising the steps of:

a) receiving a communications packet at first distributed system, said communications packet being directed to a user of a connected second distributed system;

b) checking network traffic to determine if said communications packet may be received over said network by said user at a selected quality level; and

c) routing communications through the public communications network to said connected second distributed system in response to a determination that packets cannot be passed over said network at said selected quality level.

2. A method as in claim 1 wherein said network comprises a voice over internet protocol (VoIP) private network and routed said communications is a call to said user.

3. A method as in claim 2 wherein said call is routed from said first distributed system to said selected contact point of said second distributed system.

4. A method as in claim 3 wherein each said selected common contact point is a private direct inward dial (DID) number.

5. A method as in claim 4 wherein the step c) of routing said call comprises the steps of:

i) retrieving from a subscriber/line table a distributed system index corresponding to said second distributed system;

ii) identifying said DID number for said second system in response to said distributed system index;

iii) assigning an alternate route to said packet; and

iv) providing said packet and packet related information to said DID number for said second distributed system.

6. A method as in claim 4 further comprising the steps of:

d) querying each incoming call to connected distributed systems to identify whether said incoming call is an IP alternate routed call;

e) matching any identified alternate routed call with internal call information; and

f) passing said incoming packet as an in-network call to said user.

7. A method as in claim 6 wherein identifying whether an incoming packet is an IP alternate routed call comprises performing a digit analysis on a called number associated with the incoming packet, whenever said digit analysis indicates that incoming call originates from a private DID number, said incoming packet is identified as an alternate routed call.

8. A method as in claim 6 wherein the step e) of matching the identified alternate routed call comprises identifying a calling number from an alternate route call correlator table.

9. A method as in claim 6 wherein the step f) of passing said incoming packet to said user as an in-network call comprises:

providing an internal ring;

displaying a calling party number corresponding to an original user placing said call; and

displaying a user name of a calling party.

10. A method as in claim 9 wherein said in-network call is internal to said network originating from a user at said first distributed system to said user at said second distributed system.

11. A method as in claim 9 wherein said in-network call is an incoming call from a caller on said public communications network to said user at said second distributed system.

12. A method as in claim 4 wherein each said DID number is on an ISDN trunk.

13. A private communications network providing communications between a plurality of network users and to a public communications network, private communications network users connecting to said public communications network over said private communications network, said private communications network comprising:

a plurality of distributed systems connected together and in communication with each other, users at each of said connected distributed systems selectively in communication with each other;

an identified common contact point at each distributed system, each distributed system connected to the public communications network through said common contact point, each said distributed system communicating with other ones of said plurality of distributed systems through said common contact point over said public communications network; and

a call manager in at least one of said plurality of distributed systems, said call manager managing communications between users at different connected said distributed systems, said call manager selectively diverting calls between users at different ones of said plurality of distributed systems over said public communications network.

14. A private communication network as in claim 13 wherein each of said plurality of distributed systems includes a gateway and said common contact point is a dedicated direct inward dial (DID) number at a public services telephone network (PSTN) trunk.

15. A private communications network as in claim 14 wherein said PSTN trunk is an ISDN trunk.

16. A private communications network as in claim 15 wherein said gateway is a time division multiplexed (TDM) packet based conversion gateway.

17. A private communications network as in claim 15 wherein said call manager includes an alternate routing DID number table, an alternate route correlator table, a subscriber/line table and a digit analysis/dial plan table.

18. A private communication network as in claim 17 wherein the alternate routing DID table assigns a single index to all users at each DID number for each distributed system.

19. A private communication network as in claim 17 wherein the subscriber/line table includes an extension field indicating each corresponding user's extension, a public number field indicating whether said each corresponding user has a public number and a DS index field corresponding to an index in said alternate routing DID table.

20. A private communications network as in claim 17 wherein the alternate route correlator table is a dynamically changing table wherein said call manager adds table entries to said alternate route correlator table in response to creation of a new alternate routed call to a user, each added entry including a correlator number field, a called number field and calling number field.

21. A private communications network as in claim 14, wherein said private communications network is a voice over internet protocol (VoIP) private network and said dedicated DID number is a single dedicated DID number at each distributed system.